Catalogue of Insects Collected by William Sharp Macleay in Cuba 1825-1836

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All of William Sharp Macleay's labelled Cuban insects are now in a separately labelled Cuban insect cabinet in the Macleay Museum. There are over 7,349 labelled, pinned and partially identified. Other unlabelled specimens are still to be found throughout the collection. The geographical area where Cuba lies is also within the bio-geographical area for the southern United States, the Bahamas, the Caribbean and the northern most areas of South America. The biological scientists of these surrounding countries will find the information and knowledge of the distributions of insects of Cuba found in 1825 to 1836 of tremendous interest in relation to the possible distributions of insect faunas found or no longer found in these areas today.

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INTRODUCTION

The following is a catalogue of Cuban insects collected by William Sharp Macleay during his appointment as commissioner for the abolishment of the slave trade in Havana from 1825 to 1836. The specimens were taken from Cuba to England at the conclusion of his posting and consequently were moved to Sydney, Australia, with W.S. Macleay when he moved there to live. The collection of over 7000 insects were spread throughout the Macleay Museum's entomology collection but were readily identified using locality labels. This is the first account of the Macleay Cuban collection and although initially the collection may have been larger, it is probable that over 170 years, specimens have had labels removed, been damaged beyond usefulness, or removed from the Macleay Museum altogether. All the remaining labelled Cuban specimens are now reunited in a single collection and are for the most part in good condition.

The collection consists of 7349 insects across at least 11 orders as follows:

Blattodea	33
Coleoptera	2172
Diptera	385
Hemiptera	729
Hymenoptera	3509
Lepidoptera	407
Neuroptera	40
Odonata	24
Orthoptera	1
Phasmatodea	20
Siphonaptera	29

While care was taken to provide the most up to date species names, information was not able to be found on some of the labelled species name, and these have been included as written on the label. Where the year has been omitted it is where we were unable to find the complete documentation of the description and the publication.

William Sharp Macleay left England for Cuba in October 1825, to take up his duties in connection with the Mixed British and Spanish Court of Commission for the Abolition of the Slave Trade established at

Havana. His residence in Cuba lasted from December 1825 to early in the year 1836. The catalogue of insects included in this paper, includes all those insects (over 7000) that are clearly labelled with the locality Cuba. William collected many specimens during those eleven years in Cuba, and then brought them to Australia. All of William Sharp's collection is now housed in the Macleay Museum at the University of Sydney. There may be many more Cuban insects in the Macleay Museum but this catalogue only deals with specimens with the label Cuba.

William Sharp Macleay was born in London, on 21st July 1792, the eldest son of Alexander Macleay (1767 - 1848) who amassed probably the finest insect collection in Europe and which eventually Alexander brought with him to Australia in 1826. William Sharp Macleay arrived in Australia in 1839 with his own insect collection from European collecting trips, his collection from Cuba and a collection of insects from his trip to the United States with Mr Titian Peale (Fletcher 1920).

William was educated at Westminster and Trinity College Cambridge and graduated with a BA in 1814 and MA in 1818. On leaving the University he was appointed as Attache to the British Embassy in France. What awakened and developed his interest in Zoology seems primarily to have been his father's example, influence and fine collection of insects. During his time in Paris he had the opportunity of meeting Cuvier, Latreille and other distinguished naturalists of that time, as well as appreciating the importance of the magnificent establishment of the Jardin des Plantes. He subsequently was appointed Secretary to the Board for liquidating British claims on the French Government, established at the peace of 1815 - 1825. He was then sent as Commissioner of Arbitration of the Slave Trade established at Havana in Cuba. In 1830 he became the Commissary Judge of the same court. In 1836, he was appointed to be the Judge of the mixed British and Spanish Court of Justice, established under the treaty of 1835 – 1836. In 1836 he returned to England. In 1837 he retired from the Public Service. He left England in 1838 for Australia with his cousins William and John and arrived in Sydney in March 1839. Here he continued to collect insects and studied marine life. He was also a trustee of the Australian Museum from 1853 - 1862. He was universally recognised as the leading zoologist in Sydney from 1839 up to the time of his death. William Sharp died in Sydney on the 26th January 1865 and was buried in the family tomb in Camperdown Cemetery (Fletcher 1920).

William Sharp's published work began in 1819 and ended in 1847 (over 30 published papers). There were no publications on any of the insects that he collected in Cuba.

During his voyage to Cuba, in the months of October, November and December of 1825, he made notes on the Ornithology of the Islands of Madeira, Teneriffe and Saint Jago, as well as observations at Barbados, Martinique and off the coast of Saint Domingo. He always seemed to be taking notes of his natural surroundings wherever he went. However there seems to be no detailed notes of his insect collecting in Cuba, or at least none that has been found. However there is one interesting letter he wrote to his trusted friend Kirby, dated 3rd 1827 January, about a year after his arrival. William writes:

> *"The climate has, I thank God, hitherto agreed with me much better than that of England: but there is a languor attendant upon every kind of exertion, which makes reading or study here a very different thing from what it is in England."*
>
> *"This is a good place for Wading Birds, Lizards, Butterflies and Sphinges, (a term meaning Hawk Moths), but apparently nothing else. I live in the country, where I have a large house and garden: this is my principal amusement, as I take great pleasure in cultivating Orchideae, particularly those which are parasitical on trees. The disagreeable are ants, scorpions, mygales and mosquitoes. The latter were quite a pest on my first arrival within the tropics, but now I mind them as much as I did gnats in England. "*

The place of his residence in Cuba was Guanabacoa, (an Indian name meaning "site of the waters ") which he described as if " living in the country is a picturesquely situated amid woods, on high hills which furnish a fine view, is a town a few kilometres from the capitol of Cuba, Havana."

During his leisure hours, natural history soon began to claim his attention as he sent specimens of lizards, bats and 45 species of birds to England to be exhibited at meetings of the Zoological Club of the Linnean Society in 1828. Later William, sent a foetal specimen of a dolphin (Fletcher 1920).

While no papers dealing especially with Cuban insects were published by W.S. Macleay, among his papers were thirty nine water-colour drawings of lepidopterous larvae, from which he may have reared adults. Besides these there are a number of pencil or pen and ink sketches of Lepidoptera, scorpions, ticks and mites (Fletcher 1920).

The scientific world of today has been given an opportunity to know what was on the Island of Cuba in the years 1825 to 1836 due to the scientific endeavours of William Sharp Macleay in the form of over 7000 dry pinned labelled insects now placed together as the Cuban insect collection are housed in the insect collection in the Macleay Museum at the University of Sydney.

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REFERENCES

Naumann I.D. and Steinbauer M.J. (2001). Egg parasitoids of Australian Coreidae (Hemiptera). *Australian Journal of Entomology* **40**, 9-16.

Triplehorn, C.A. and Johnson NF (2005) 'Borror and DeLong's Introduction to the Study of Insects.' (Thomson Learning, Southbank, Victoria, Australia.)

Fletcher, J.J. (1920). The Society's heritage from the Macleays. *Proceedings of the Linnean Society of New South Wales* **45**, 567-635.

Macleay, W.S. (1838). 'Illustrations of the Annulosa of South Africa'. (Smith, Elder and Co., London).

CATALOGUE

Blattodea

FAMILY	GENUS	SPECIES	NUMBER
Blattidae			5
Nocticolidae			28

Coleoptera

FAMILY	GENUS	SPECIES	NUMBER
Anthribidae	*Exophthalmus*	*sommeri* Rausenhauer 1840	2
Bostrichidae	*Amphicerus*	*cornutus* (Pallas) 1772	2
Bostrichidae	*Apate*	*monachus* Fabricius 1775	12
Bostrichidae	*Dinoderus*	*minutus* (Fabricius) 1775	3
Bostrichidae	*Tetrapriocera*	*tridens* (Fabricius) 1792	4
Bostrichidae	*Xylomeira*	*torquata* (Fabricius) 1801	1
Bostrichidae			1
Brentidae			29
Buprestidae	*Asthechrysa*	*spotoica*	20
Buprestidae	*Polycesta*	*angulosa*	2
Buprestidae	*Psiloptera*	*aulica* Dejean	11
Buprestidae	*Psiloptera*	*torquata* Dalman	2
Buprestidae			14
Carabidae	*Calosoma*		1
Carabidae	*Cicindela*	*sagra*	19
Carabidae	*Galerita*	*ruficollis* Fabricius	2
Carabidae	*Megacephala*	*acutipennis* Dejean 1825	1
Carabidae	*Megacephala*	*affinis* Dejean 1825	4
Carabidae	*Megacephala*	*havanensis*	2
Carabidae	*Scarites*	*subterraneus* Fabricius 1775	32
Carabidae			17
Cerambycidae	*Amphidesmus*		2
Cerambycidae	*Callichroma*		1
Cerambycidae	*Clytus*	*devastator* Laport & Gory	2
Cerambycidae	*Eburia*		2
Cerambycidae	*Eburodacrys*	*havanensis* Chevrolat 1862	1
Cerambycidae	*Eburodacrys*		2
Cerambycidae	*Elaphidion*	*irroratum* Linnaeus 1767	2
Cerambycidae	*Elateropsis*	*erythromera*	4
Cerambycidae	*Elateropsis*	*fuliginosa* Fabricius	2
Cerambycidae	*Elateropsis*	*lineate* Linnaeus	5
Cerambycidae	*Elateropsis*	*venusta* Chevrolat	2
Cerambycidae	*Elateropsis*		15
Cerambycidae	*Eupogonius*	*maculicornis* Chevrolat 1862	2
Cerambycidae	*Eupogonius*		4
Cerambycidae	*Leptostylus*		2
Cerambycidae	*Malladon*	*maxillosus* Drury	2
Cerambycidae	*Odontocera*		2
Cerambycidae	*Orthomegas*	*sericeus* Oliver	2
Cerambycidae	*Ptychodes*	*trilineatus* Linnaeus	6
Cerambycidae	*Solenoptera*	*thomae* Linnaeus 1767	1
Cerambycidae	*Spalacopsis*	*filum* Klug 1829	5

Cerambycidae	*Stenodontes*	*damicornis* Linnaeus 1771	5
Cerambycidae			161
Chrysomelidae	*Cassida*	*dorsopunctata* Boheman	16
Chrysomelidae	*Coptocycla*		2
Chrysomelidae			27
Ciidae			6
Curculionidae	*Attelabus*		4
Curculionidae	*Baridius*	*madrimaculatus* Boheman	2
Curculionidae	*Calandra*	*agaves*	1
Curculionidae	*Calandra*	*sericea* Olivier 1807	1
Curculionidae	*Diaprepes*		14
Curculionidae	*Eurhinus*		5
Curculionidae	*Exophthalmus*	*lactus* Olivier	2
Curculionidae	*Exophthalmus*	*luctuosus* Gyllenhal	2
Curculionidae	*Exophthalmus*	*scalaris* Champion 1911	3
Curculionidae	*Exophthalmus*	*spengleri* Linnaeus	2
Curculionidae	*Exophthalmus*		2
Curculionidae	*Hilipus*	*freyreissi* Boheman 1836	2
Curculionidae	*Hilipus*	*guttatus* Boheman 1843	2
Curculionidae	*Hilipus*	*rusticus* Boheman 1836	1
Curculionidae	*Lachnopus*	*curvipes* Fabricius	2
Curculionidae	*Lachnopus*	*hispidus* Gyllenhal	2
Curculionidae	*Lachnopus*	*vittatus* Gyllenhal	2
Curculionidae	*Lachnopus*		1
Curculionidae	*Pachnëus*	*azurescens* Gyllenhal	10
Curculionidae	*Pachnëus*	*litus* Germar	2
Curculionidae	*Peltophorus*		5
Curculionidae	*Polydacrys*	*modestus* Gyllenhal	2
Curculionidae	*Prepodes*	*spectabilis* Dejean	14
Curculionidae	*Ptilopus*	*vittatus* Dejean	19
Curculionidae	*Rhina*	*scrutator* Olivier	4
Curculionidae	*Scyphophorus*	*atheniunus* Schedl	1
Curculionidae	*Sphenophorus*	*sericeus* Latreille	5
Curculionidae	*Sphenophorus*		1
Curculionidae	*Tetrabothynus*	*spectabilis* Gyllenhal	1
Curculionidae	*Tetrabothynus*		1
Curculionidae	*Tylomus*		2
Curculionidae	*Xyleborus*		25
Curculionidae			454
Dytiscidae	*Rhantus*	*calidus* Fabricius 1792	3
Dytiscidae			9
Elateridae	*Conoderus*	*lobatus* Say	2
Elateridae	*Pyrophorus*	*phosphorescens*	1
Elateridae			7
Gyrinidae			7
Histeridae			225
Lampyridae			6
Lycidae	*Calopteron*	*bicolor* Linnaeus	1
Lycidae			17
Mordellidae			5

Passalidae	*Passalus*	*convexus* Schonsafer	1
Passalidae	*Passalus*	*interstitialis* (Escholtz) 1829	2
Rhipiphoridae			5
Scarabaeidae	*Dyscinetus*		3
Scarabaeidae	*Phileurus*	*valgus* (Olivier) 1789	2
Scarabaeidae	*Planophileurus*	*planicollis* (Chevrolat) 1825	1
Scarabaeidae	*Rutela*	*Formosa* Burmeister 1844	2
Scarabaeidae			52
Tenebrionidae			18
Throscidae	*Drapetus*	*azureus* Dejean	1
Throscidae			2
Trogidae	*Trox*		8
Trogossitidae			80
UNIDENTIFED			652

Diptera

FAMILY	GENUS	SPECIES	NUMBER
Tachinidae			8
Tipulidae			5 (EBH)
UNIDENTIFIED			367
UNIDENTIFIED			5 (EBH)

Hemiptera

FAMILY	GENUS	SPECIES	NUMBER
Belastomatidae			11
Berytidae			1
Cicadidae	*Cicada*	*poeyi* Macleay	1
Cicadidae	*Cicada*	*viridicincta* Macleay	6
Cicadidae			13
Cicadidae			8 (EBH)
Coreidae			18
Eurymelidae			61
Gerridae			35
Membracidae			23
Membracidae			7 (EBH)
Miridae			1
Nepidae			4
Notonectidae	*Anisops*		3
Notonectidae			1
Pentatomidae			20
Pyrrhocoridae			29
Reduviidae	*Phymata*	*crassipes* Fabricius 1775	36
Reduviidae	*Ploiaria*		17
Reduviidae			38
Tingidae	*Galeatus*	*cubensis*	1
UNIDENTIFIED			387
UNIDENTIFIED			6 (EBH)

Hymenoptera

FAMILY	GENUS	SPECIES	NUMBER
Anthophoridae			186
Apidae	*Xylocopa*	*fimbriata* Fabricius 1804	1
Apidae			110
Bethylidae			8
Braconidae			3
Chalcididae	*Brachymeria*	*belfragei* Crawford 1910	1
Chalcididae	*Brachymeria*	*incerta* Cresson 1865	8
Chalcididae	*Brachymeria*	*robusta* Cresson	44
Chalcididae	*Brachymeria*		47
Chalcididae	*Chalcis*	*flebilis* Cresson 1872	8
Chalcididae	*Chalcis*		3
Chalcididae	*Conura*	*debilis* Say 1836	4
Chalcididae	*Haltichella*	*xanticles* (Walker)	8
Chalcididae	*Spilochalcis*	*cubule* (Cresson)	19
Chalcididae	*Spilochalcis*	*femorata* (Fabricius)	8
Chalcididae	*Spilochalcis*	*maniae* (Riley)	2
Chalcididae	*Spilochalcis*	*nintifemoea*	2
Chalcididae	*Spilochalcis*	*transitive* (Walker)	33
Chalcididae	*Spilochalcis*		100
Chalcididae	*Spilochalcis*		11
Chalcididae	*Spilochalcis*		25
Chalcididae			21
Chrysididae	*Caenochrysis*	*doriae* (Gribodo)	1
Chrysididae	*Chrysis*	*insularis* Guérin	5
Chrysididae	*Chrysis*	*insularis* Guérin	5
Chrysididae	*Chrysis*	*purpuriventris*	15
Chrysididae	*Chrysis*	*purpuriventris*	6
Chrysididae	*Chrysis*	*superba* Cresson	5
Chrysididae	*Holopyga*	*ventralis* Say	2
Chrysididae			1
Cynipidae			10
Encyrtidae			1
Euchartidae	*Kapala*	*furcata* Fabricius 1804	2
Euchartidae			24
Eurytomidae			2
Formicidae	*Acromyrmex*		14
Formicidae	*Atta*		17
Formicidae	*Camponotus*		13
Formicidae	*Crematogaster*		1
Formicidae	*Cyphomyrmex*		1
Formicidae	*Odontomachus*	*relictus*	13
Formicidae	*Odontomachus*		6
Formicidae	*Pheidole*		11
Formicidae	*Pseudomyrmex*		6
Formicidae			73
Ichneumonidae			16
Leucospidae			1

Megachilidae			2
Mutillidae			72
Platygastridae			6
Pompilidae	*Pepsis*		1
Pompilidae			265
Scoliidae	*Elis*	*trifasciata* Burmeister	1
Scoliidae	*Elis*	*trifasciata* Burmeister	1
Scoliidae			152
Sphecidae	*Monedula*	*insularis* Dahl	1
Sphecidae	*Nysson*	*albilabris*	1
Sphecidae	*Nysson*	*collaris*	1
Sphecidae	*Nysson*	*hyalius*	1
Sphecidae	*Nysson*	*sericeus*	1
Sphecidae			198
Tiphiidae			97
Vespidae	*Ancistrocerus*	*cingulatus* Cresson	1
Vespidae	*Eumenes*		1
Vespidae	*Euodynerus*		2
Vespidae	*Monobia*		1
Vespidae	*Pachodynerus*		50
Vespidae	*Parancistrocerus*	*enyo* (Lepeletier) 1841	27
Vespidae	*Parancistrocerus*		18
Vespidae	*Zeta*		12
Vespidae	*Zethus*		14
Vespidae			23
UNIDENTIFIED			1657

Lepidoptera

FAMILY	GENUS	SPECIES	NUMBER
Lycaenidae	*Cyclargus*	*ammon* (Lucas) 1857	2
Lycaenidae	*Eumaeus*	*atala* Poey 1832	1
Lycaenidae	*Leptotes*	*theonus* (Lucas) 1857	1
Lycaenidae			13
Lycaenidae			5 (EBH)
Nymphalidae	*Anaea*	*troglodyte* Fabricius 1775	3
Nymphalidae	*Apatura*	*pavonii* Latreille	3
Nymphalidae	*Eunica*		2
Nymphalidae	*Hypanartia*	*paullus* Fabricius 1793	2
Nymphalidae	*Megalura*	*eleucha* Hübner	4
Nymphalidae	*Metamorpha*	*stelenes* Linnaeus 1758	1
Nymphalidae	*Phyciodes*	*clio*	4
Nymphalidae	*Siderone*	*ide* Hübner 1823	5
Nymphalidae	*Siderone*		1
Nymphalidae			8
Nymphalidae			152 (EBH)
Papilionidae	*Papilio*	*andraemon* Boisduval	4
Papilionidae	*Papilio*	*androgeus*	1
Papilionidae	*Papilio*	*caiguanabus*	2
Papilionidae	*Papilio*	*caiguanabus*	2

Papilionidae	*Papilio*	*cresphontes*	1
Papilionidae	*Papilio*	*lamarchei*	1
Papilionidae	*Papilio*	*lycophron* (Hübner)	2
Papilionidae	*Papilio*	*oxynius* (Geyer) 1827	1
Papilionidae	*Papilio*	*victorinus* Doubleday 1844	3
Papilionidae	*Papilio*	*villersi* Boisduval	3
Pieridae			71
Sphingidae			27
UNIDENTIFIED			62
UNIDENTIFIED			20 (EBH)

Neuroptera

FAMILY	GENUS	SPECIES	NUMBER
Myrmeleontidae			4
UNIDENTIFIED			31
UNIDENTIFIED			5 (EBH)

Odonata

FAMILY	GENUS	SPECIES	NUMBER
UNIDENTIFIED			24

Orthoptera

FAMILY	GENUS	SPECIES	NUMBER
UNIDENTIFIED			1

Phasmatodea

FAMILY	GENUS	SPECIES	NUMBER
UNIDENTIFIED			20

Siphonaptera (slide mounted)

FAMILY	GENUS	SPECIES	NUMBER
Pulicidae	*Ctenocephalides*	*felis* (Bouché) 1835	9
Pulicidae	*Ctenocephalides*	*felis* (Bouché) 1836	8
Pulicidae	*Pulex*	*simulans* Baker 1895	5
Pulicidae	*Pulex*	*simulans* Baker 1896	5
Pulicidae	*Pulex*		1
Tungidae	*Tunga*	*penetrans* (Linnaeus) 1758	1